

Sequence Listing

<110> Avi J. Ashkenazi
 Kevin P. Baker
 David Botstein
 Luc Desnoyers
 Dan L. Eaton
 Napoleone Ferrara
 Sherman Fong
 Wei-Qiang Gao
 Hanspeter Gerber
 Mary E. Gerritsen
 Audrey Goddard
 Paul J. Godowski
 Austin L. Gurney
 Ivar J. Kljavin
 Jennie P. Mather
 Mary A. Napier
 James Pan
 Nicholas F. Paoni
 Margaret Ann Roy
 Timothy A. Stewart
 Daniel Tumas
 Colin K. Watanabe
 P.Mickey Williams
 William I. Wood
 Zemin Zang

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Arg Ala Gly Glu Ser Gln Asp Lys Cys Thr Tyr Thr Phe Ile Val
50 55 60
Pro Gln Gln Arg Val Thr Gly Ala Ile Cys Val Asn Ser Lys Glu
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Pro Glu Val Leu Leu Glu Asn Arg Val His Lys Gln Glu Leu Glu
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65 70 75

Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
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Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
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Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
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Thr	Ile	Ser	Arg	Pro 110	Leu	Ile	Cys	Arg	Phe 115	Gly	Tyr	Gln	Met	Asp 120
Glu	Ser	Asn	Gln	Cys 125	Val	Asp	Val	Asp	Glu 130	Cys	Ala	Thr	Asp	Ser 135
His	Gln	Cys	Asn	Pro 140	Thr	Gln	Ile	Cys	Ile 145	Asn	Thr	Glu	Gly	Gly 150
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Phe	Thr	Leu	Asn	Glu 200	Asp	Gly	Arg	Ser	Cys 205	Gln	Asp	Val	Asn	Glu 210
Cys	Ala	Thr	Glu	Asn 215	Pro	Cys	Val	Gln	Thr 220	Cys	Val	Asn	Thr	Tyr 225
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Cys	Ser	Cys	Pro	Pro 275	Gly	Tyr	Ile	Leu	Leu 280	Asp	Asp	Asn	Arg	Ser 285
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Arg	Cys	Met	Cys	Pro 335	Ala	Glu	Asn	Pro	Gly 340	Cys	Arg	Asp	Gln	Pro 345
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Glu Phe Tyr Met	Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val				
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Met Thr Arg Pro	Ile Lys Gly Pro Arg Glu Ile Gln Leu Asp Leu				
	410		415		420
Glu Met Ile Thr	Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser				
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Val Ile Arg Leu	Arg Ile Tyr Val Ser Gln Tyr Pro Phe				
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 <213> Homo Sapien

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Pro Leu Pro Cys Ser Ala Pro Ser Val Gln Leu Ser Tyr Gln Pro
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Ser Gln Asp Gly Ala Glu Leu Arg Pro Gly Phe Val Leu Ala Leu
245 250 255

His Cys Asp Val Asp Gly Gln Pro Ala Pro Gln Leu His Trp His
260 265 270

Ile Gln Ile Pro Ser Gly Ile Val Glu Ile Thr Ser Pro Asn Val
275 280 285

Gly Thr Asp Gly Arg Ala Leu Pro Gly Thr Pro Val Ala Ser Ser
290 295 300

Gln Pro Arg Phe Gln Ala Phe Ala Asn Gly Ser Leu Leu Ile Pro
305 310 315

Asp Phe Gly Lys Leu Glu Glu Gly Thr Tyr Ser Cys Leu Ala Thr
320 325 330

Asn Glu Leu Gly Ser Ala Glu Ser Ser Val Asp Val Ala Leu Ala
335 340 345

Thr Pro Gly Glu Gly Gly Glu Asp Thr Leu Gly Arg Arg Phe His
350 355 360

Gly Lys Ala Val Glu Gly Lys Gly Cys Tyr Thr Val Asp Asn Glu
365 370 375

Val Gln Pro Ser Gly Pro Glu Asp Asn Val Val Ile Ile Tyr Leu
380 385 390

Ser Arg Ala Gly Asn Pro Glu Ala Ala Val Ala Glu Gly Val Pro
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<210> 19
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 19
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<210> 20
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<212> DNA
<213> Homo Sapien

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 <212> PRT
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Arg	Val	Leu	Ile	Gly 50	Phe	Glu	Glu	Asp	Ile 55	Leu	Ile	Val	Ser	Glu 60
Gly	Lys	Met	Ala	Pro 65	Phe	Thr	His	Asp	Phe 70	Arg	Lys	Ala	Gln	Gln 75
Arg	Met	Pro	Ala	Ile 80	Pro	Val	Asn	Ile	His 85	Ser	Met	Asn	Phe	Thr 90
Trp	Gln	Ala	Ala	Gly 95	Gln	Ala	Glu	Tyr	Phe 100	Tyr	Glu	Phe	Leu	Ser 105
Leu	Arg	Ser	Leu	Asp 110	Lys	Gly	Ile	Met	Ala 115	Asp	Pro	Thr	Val	Asn 120
Val	Pro	Leu	Leu	Gly 125	Thr	Val	Pro	His	Lys 130	Ala	Ser	Val	Val	Gln 135
Val	Gly	Phe	Pro	Cys 140	Leu	Gly	Lys	Gln	Asp 145	Gly	Val	Ala	Ala	Phe 150
Glu	Val	Asp	Val	Ile 155	Val	Met	Asn	Ser	Glu 160	Gly	Asn	Thr	Ile	Leu 165
Gln	Thr	Pro	Gln	Asn 170	Ala	Ile	Phe	Phe	Lys 175	Thr	Cys	Gln	Gln	Ala 180
Glu	Cys	Pro	Gly	Gly 185	Cys	Arg	Asn	Gly	Gly 190	Phe	Cys	Asn	Glu	Arg 195
Arg	Ile	Cys	Glu	Cys 200	Pro	Asp	Gly	Phe	His 205	Gly	Pro	His	Cys	Glu 210
Lys	Ala	Leu	Cys	Thr 215	Pro	Arg	Cys	Met	Asn 220	Gly	Gly	Leu	Cys	Val 225
Thr	Pro	Gly	Phe	Cys 230	Ile	Cys	Pro	Pro	Gly 235	Phe	Tyr	Gly	Val	Asn 240
Cys	Asp	Lys	Ala	Asn 245	Cys	Ser	Thr	Thr	Cys 250	Phe	Asn	Gly	Gly	Thr 255
Cys	Phe	Tyr	Pro	Gly 260	Lys	Cys	Ile	Cys	Pro 265	Pro	Gly	Leu	Glu	Gly 270
Glu	Gln	Cys	Glu	Ile 275	Ser	Lys	Cys	Pro	Gln 280	Pro	Cys	Arg	Asn	Gly 285
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Gln	Gly	Asp	Leu	Cys 305	Ser	Lys	Pro	Val	Cys 310	Glu	Pro	Gly	Cys	Gly 315
Ala	His	Gly	Thr	Cys	His	Glu	Pro	Asn	Lys	Cys	Gln	Cys	Gln	Glu

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 Trp Val Arg Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg
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<220>
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<210> 27
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 aactgcctga agttcgcaca ttcagattgt tgtgtccatg gagtttttagg 3100
 aggggatggc ctttccgggc ttcgcacttc catcctctcc cacttccatc 3150
 tggcgtecca caccttgctc cctgcacttc tggatgacac aggggtgctgc 3200
 tgccctcctag tctttgcctt tgctgggcct tctgtgcagg agacttggtc 3250
 tcaaagctca gagagagcca gtccgggtccc agctcctttg tcccttctc 3300
 agaggccttc cttgaagatg catctagact accagcctta tcagtgttta 3350
 agcttattcc ttttaacataa gcttcctgac aacatgaaat tggtgggggtt 3400
 ttttggcggtt gggtgatttg tttaggtttt gctttatacc cgggccaaat 3450
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 ataaatatga aacctcatrt taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3550
 aa 3552

<210> 29
 <211> 386
 <212> PRT
 <213> Homo Sapien

<400> 29
 Met Gly Leu Trp Gly Gln Ser Val Pro Thr Ala Ser Ser Ala Arg
 1 5 10 15
 Ala Gly Arg Tyr Pro Gly Ala Arg Thr Ala Ser Gly Thr Arg Pro
 20 25 30
 Trp Leu Leu Asp Pro Lys Ile Leu Lys Phe Val Val Phe Ile Val
 35 40 45
 Ala Val Leu Leu Pro Val Arg Val Asp Ser Ala Thr Ile Pro Arg
 50 55 60
 Gln Asp Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln Arg
 65 70 75
 Arg Ser Leu Lys Glu Glu Glu Cys Pro Ala Gly Ser His Arg Ser
 80 85 90
 Glu Tyr Thr Gly Ala Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr
 95 100 105
 Thr Ile Ala Ser Asn Asn Leu Pro Ser Cys Leu Leu Cys Thr Val
 110 115 120

Cys	Lys	Ser	Gly	Gln	Thr	Asn	Lys	Ser	Ser	Cys	Thr	Thr	Thr	Arg
				125					130					135
Asp	Thr	Val	Cys	Gln	Cys	Glu	Lys	Gly	Ser	Phe	Gln	Asp	Lys	Asn
				140					145					150
Ser	Pro	Glu	Met	Cys	Arg	Thr	Cys	Arg	Thr	Gly	Cys	Pro	Arg	Gly
				155					160					165
Met	Val	Lys	Val	Ser	Asn	Cys	Thr	Pro	Arg	Ser	Asp	Ile	Lys	Cys
				170					175					180
Lys	Asn	Glu	Ser	Ala	Ala	Ser	Ser	Thr	Gly	Lys	Thr	Pro	Ala	Ala
				185					190					195
Glu	Glu	Thr	Val	Thr	Thr	Ile	Leu	Gly	Met	Leu	Ala	Ser	Pro	Tyr
				200					205					210
His	Tyr	Leu	Ile	Ile	Ile	Val	Val	Leu	Val	Ile	Ile	Leu	Ala	Val
				215					220					225
Val	Val	Val	Gly	Phe	Ser	Cys	Arg	Lys	Lys	Phe	Ile	Ser	Tyr	Leu
				230					235					240
Lys	Gly	Ile	Cys	Ser	Gly	Gly	Gly	Gly	Gly	Pro	Glu	Arg	Val	His
				245					250					255
Arg	Val	Leu	Phe	Arg	Arg	Arg	Ser	Cys	Pro	Ser	Arg	Val	Pro	Gly
				260					265					270
Ala	Glu	Asp	Asn	Ala	Arg	Asn	Glu	Thr	Leu	Ser	Asn	Arg	Tyr	Leu
				275					280					285
Gln	Pro	Thr	Gln	Val	Ser	Glu	Gln	Glu	Ile	Gln	Gly	Gln	Glu	Leu
				290					295					300
Ala	Glu	Leu	Thr	Gly	Val	Thr	Val	Glu	Ser	Pro	Glu	Glu	Pro	Gln
				305					310					315
Arg	Leu	Leu	Glu	Gln	Ala	Glu	Ala	Glu	Gly	Cys	Gln	Arg	Arg	Arg
				320					325					330
Leu	Leu	Val	Pro	Val	Asn	Asp	Ala	Asp	Ser	Ala	Asp	Ile	Ser	Thr
				335					340					345
Leu	Leu	Asp	Ala	Ser	Ala	Thr	Leu	Glu	Glu	Gly	His	Ala	Lys	Glu
				350					355					360
Thr	Ile	Gln	Asp	Gln	Leu	Val	Gly	Ser	Glu	Lys	Leu	Phe	Tyr	Glu
				365					370					375
Glu	Asp	Glu	Ala	Gly	Ser	Ala	Thr	Ser	Cys	Leu				
				380					385					

<210> 30
 <211> 50
 <212> DNA
 <213> Artificial Sequence

Met	Arg	Pro	Leu	Ala	Gly	Gly	Leu	Leu	Lys	Val	Val	Phe	Val	Val	1	5	10	15
Phe	Ala	Ser	Leu	Cys	Ala	Trp	Tyr	Ser	Gly	Tyr	Leu	Leu	Ala	Glu	20	25	30	
Leu	Ile	Pro	Asp	Ala	Pro	Leu	Ser	Ser	Ala	Ala	Tyr	Ser	Ile	Arg	35	40	45	
Ser	Ile	Gly	Glu	Arg	Pro	Val	Leu	Lys	Ala	Pro	Val	Pro	Lys	Arg	50	55	60	
Gln	Lys	Cys	Asp	His	Trp	Thr	Pro	Cys	Pro	Ser	Asp	Thr	Tyr	Ala	65	70	75	
Tyr	Arg	Leu	Leu	Ser	Gly	Gly	Gly	Arg	Ser	Lys	Tyr	Ala	Lys	Ile	80	85	90	
Cys	Phe	Glu	Asp	Asn	Leu	Leu	Met	Gly	Glu	Gln	Leu	Gly	Asn	Val	95	100	105	
Ala	Arg	Gly	Ile	Asn	Ile	Ala	Ile	Val	Asn	Tyr	Val	Thr	Gly	Asn	110	115	120	
Val	Thr	Ala	Thr	Arg	Cys	Phe	Asp	Met	Tyr	Glu	Gly	Asp	Asn	Ser	125	130	135	
Gly	Pro	Met	Thr	Lys	Phe	Ile	Gln	Ser	Ala	Ala	Pro	Lys	Ser	Leu	140	145	150	
Leu	Phe	Met	Val	Thr	Tyr	Asp	Asp	Gly	Ser	Thr	Arg	Leu	Asn	Asn	155	160	165	
Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg	170	175	180	
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly	185	190	195	
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser	200	205	210	
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln	215	220	225	
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser	230	235							

<210> 33
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 33
 ggctggcctg cagagatc 18

<210> 34
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 aatgtgacca ctggactccc 20

<210> 35
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 35
 aggcttggaa ctcccttc 18

<210> 36
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 36
 aagattcttg agcgattcca gctg 24

<210> 37
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 aatccctgct ctatcatggtg acctatgacg acggaagcac aagactg 47

<210> 38
 <211> 1215
 <212> DNA
 <213> Homo Sapien

<400> 38
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 cccgtccctc ccgccaagc tccgtcccg cccgaggccg gctccgccct 100
 cacctcccgg ccgaggctgc cctctgcccg ggttggtccaa gatggagggc 150
 gctccaccgg ggtcgctcgc cctccggctc ctgctgttcg tggcgctacc 200

cgctccggc tggctgacga cgggcgcccc cgagccggcg ccgctgtccg 250
gagccccaca ggacggcatc agaattaatg taactacact gaaagatgat 300
ggggacatat ctaaacagca ggttggttctt aacataacct atgagagtgg 350
acaggtgtat gtaaatactg tacctgtaaa tagtggtgta acccgaataa 400
gctgtcagac tttgatagtg aagaatgaaa atcttgaaaa tttggaggaa 450
aaagaatatt ttggaattgt cagtgtagg attttagttc atgagtggcc 500
tatgacatct ggttccagtt tgcaactaat tgtcattcaa gaagaggtag 550
tagagattga tggaaaacaa gttcagcaaa aggatgtcac tgaaattgat 600
attttagtta agaaccgggg agtactcaga cattcaaact ataccctccc 650
tttggagaagaa agcatgctct actctatttc tcgagacagt gacattttat 700
ttacccttcc taacctctcc aaaaaagaaa gtggttagttc actgcaaacc 750
actagccagt atcttatcag gaatgtggaa accactgtag atgaagatgt 800
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gtcatacctg tgacagctat caacttatat ccagatggtc cagagaaaag 1100
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tttctttaaa tcggtt 1215

<210> 39
<211> 330
<212> PRT
<213> Homo Sapien

<400> 39
Met Glu Gly Ala Pro Pro Gly Ser Leu Ala Leu Arg Leu Leu Leu
1 5 10 15
Phe Val Ala Leu Pro Ala Ser Gly Trp Leu Thr Thr Gly Ala Pro
20 25 30
Glu Pro Pro Pro Leu Ser Gly Ala Pro Gln Asp Gly Ile Arg Ile
35 40 45
Asn Val Thr Thr Leu Lys Asp Asp Gly Asp Ile Ser Lys Gln Gln

				50					55					60
Val	Val	Leu	Asn	Ile 65	Thr	Tyr	Glu	Ser	Gly 70	Gln	Val	Tyr	Val	Asn 75
Asp	Leu	Pro	Val	Asn 80	Ser	Gly	Val	Thr	Arg 85	Ile	Ser	Cys	Gln	Thr 90
Leu	Ile	Val	Lys	Asn 95	Glu	Asn	Leu	Glu	Asn 100	Leu	Glu	Glu	Lys	Glu 105
Tyr	Phe	Gly	Ile	Val 110	Ser	Val	Arg	Ile	Leu 115	Val	His	Glu	Trp	Pro 120
Met	Thr	Ser	Gly	Ser 125	Ser	Leu	Gln	Leu	Ile 130	Val	Ile	Gln	Glu	Glu 135
Val	Val	Glu	Ile	Asp 140	Gly	Lys	Gln	Val	Gln 145	Gln	Lys	Asp	Val	Thr 150
Glu	Ile	Asp	Ile	Leu 155	Val	Lys	Asn	Arg	Gly 160	Val	Leu	Arg	His	Ser 165
Asn	Tyr	Thr	Leu	Pro 170	Leu	Glu	Glu	Ser	Met 175	Leu	Tyr	Ser	Ile	Ser 180
Arg	Asp	Ser	Asp	Ile 185	Leu	Phe	Thr	Leu	Pro 190	Asn	Leu	Ser	Lys	Lys 195
Glu	Ser	Val	Ser	Ser 200	Leu	Gln	Thr	Thr	Ser 205	Gln	Tyr	Leu	Ile	Arg 210
Asn	Val	Glu	Thr	Thr 215	Val	Asp	Glu	Asp	Val 220	Leu	Pro	Gly	Lys	Leu 225
Pro	Glu	Thr	Pro	Leu 230	Arg	Ala	Glu	Pro	Pro 235	Ser	Ser	Tyr	Lys	Val 240
Met	Cys	Gln	Trp	Met 245	Glu	Lys	Phe	Arg	Lys 250	Asp	Leu	Cys	Arg	Phe 255
Trp	Ser	Asn	Val	Phe 260	Pro	Val	Phe	Phe	Gln 265	Phe	Leu	Asn	Ile	Met 270
Val	Val	Gly	Ile	Thr 275	Gly	Ala	Ala	Val	Val 280	Ile	Thr	Ile	Leu	Lys 285
Val	Phe	Phe	Pro	Val 290	Ser	Glu	Tyr	Lys	Gly 295	Ile	Leu	Gln	Leu	Asp 300
Lys	Val	Asp	Val	Ile 305	Pro	Val	Thr	Ala	Ile 310	Asn	Leu	Tyr	Pro	Asp 315
Gly	Pro	Glu	Lys	Arg 320	Ala	Glu	Asn	Leu	Glu 325	Asp	Lys	Thr	Cys	Ile 330

<210>	40
<211>	2498

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 gaggggtctag cctgggtgtg tatggagggg ctagcctggg tgagtatgga 1500
 gggctctagcc tgggtgtgta cggaggggtct agtctgagtg cgtgtgggga 1550
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 caagaaggct gccaccattc cctgccagcc caagaactcc agcttcccca 1650
 ctgcctctgt gtgccccttt gcgtcctgtg aaggccattg agaaatgccc 1700
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 ctctccagc cccaggcag tgccttacct gtgggtgcca gaaaagtgcc 2400
 cctaggttgg tgggtctaca ggagcctcag ccaggcagcc caccaccacc 2450
 tggggccctg cctcaccaag gaaataaaga ctcaagccat aaaaaaaaa 2498

<210> 41
 <211> 263
 <212> PRT
 <213> Homo Sapien

<400> 41
 Met Arg Pro Gly Ala Pro Gly Pro Leu Trp Pro Leu Pro Trp Gly
 1 5 10 15
 Ala Leu Ala Trp Ala Val Gly Phe Val Ser Ser Met Gly Ser Gly
 20 25 30

<210> 43
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 43
 ggggtgggata gacctgcg 18

 <210> 44
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 44
 aaggccaaga aggctgcc 18

 <210> 45
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 45
 ccaggcctgc agacccag 18

 <210> 46
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 46
 cttcctcagt ccttccagga tatc 24

 <210> 47
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 47
 aagctggata tcctccgtgt tgtc 24

 <210> 48
 <211> 27
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

cctgaagagg catgactgct tttctca 27

<210> 49

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 49

ggggataaac ctattaatta ttgctac 27

<210> 50

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 50

aacgtcacct acatctcctc gtgccacatg cgccaggcca cctg 44

<210> 51

<211> 1690

<212> DNA

<213> Homo Sapien

<400> 51

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 cgctgctggg gttgtggctg ttgctgtgca gctgaggatg ccccgagggc 100
 gccgagctgc gtgctccgcc agataaaatc gcgattattg gagccggaat 150
 tgggtggcact tcagcagcct attacctgcy gcagaaattt gggaaagatg 200
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 atgatgggtgc aggggcaaga atacgaggca ggagggttctg tcatccatcc 300
 tttaaactctg cacatgaaac gttttgtcaa agacctgggt ctctctgctg 350
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 tttgaggaga gcaactgggt cataattaac gtgattaaat tagtttggcg 450
 ctatggattt caatccctcc gtatgcacat gtgggtagag gacgtgttag 500
 acaagttcat gaggatctac cgctaccagt ctcatgacta tgccttcagt 550

agtgtcgaaa aattacttca tgctctagga ggagatgact tccttggaat 600
 gcttaatcga acacttcttg aaaccttgca aaaggccggc ttttctgaga 650
 agttcctcaa tgaaatgatt gtccttgta tgagggtcaa ttatggccaa 700
 agcacggaca tcaatgcctt tgtgggggcg gtgtcactgt cctgttctga 750
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 ttctgcaggc atccaaaagc aatcttatat ctggctcagt aatgtacatc 850
 gaggagaaaa caaagaccaa gtacacagga aatccaacaa agatgtatga 900
 agtgggtctac caaattggaa ctgagactcg ttcagacttc tatgacatcg 950
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 aactttgatc ctccaattga ggaattccat caatattatc aacatatagt 1050
 gacaacttta gttaaggggg aattgaatac atctatcttt agctctagac 1100
 ccatagataa atttggcctt aatacagttt taaccactga taattcagat 1150
 ttgttcatta acagtattgg gattgtgccc tctgtgagag aaaaggaaga 1200
 tcctgagcca tcaacagatg gaacatatgt ttggaagatc ttttcccaag 1250
 aaactcttac taaagcacia attttaaagc tctttctgtc ctatgattat 1300
 gctgtgaaga agccatggct tgcatactct cactataagc ccccgagaa 1350
 atgcccctct atcattctcc atgatcgact ttattacctc aatggcatag 1400
 agtgtgcagc aagtgccatg gagatgagtg ccattgcagc ccacaacgct 1450
 gcactccttg cctatcaccg ctggaacggg cacacagaca tgattgatca 1500
 ggatggctta tatgagaaac ttaaaactga actatgaagt gacacactcc 1550
 tttttccctt cctagttcca aatgactatc agtggcaaaa aagaacaaaa 1600
 tctgagcaga gatgattttg aaccagatat ttgccatta tcattgttta 1650
 ataaaagtaa tccttgctgg tcataggaaa aaaaaaaaaa 1690

<210> 52
 <211> 505
 <212> PRT
 <213> Homo Sapien

<400> 52
 Met Gly Arg Val Val Ala Glu Leu Val Ser Ser Leu Leu Gly Leu
 1 5 10 15
 Trp Leu Leu Leu Cys Ser Cys Gly Cys Pro Glu Gly Ala Glu Leu
 20 25 30

[illegible]

	320		325		330
Pro Pro Ile Glu Glu Phe His Gln Tyr Tyr Gln His Ile Val Thr	335		340		345
Thr Leu Val Lys Gly Glu Leu Asn Thr Ser Ile Phe Ser Ser Arg	350		355		360
Pro Ile Asp Lys Phe Gly Leu Asn Thr Val Leu Thr Thr Asp Asn	365		370		375
Ser Asp Leu Phe Ile Asn Ser Ile Gly Ile Val Pro Ser Val Arg	380		385		390
Glu Lys Glu Asp Pro Glu Pro Ser Thr Asp Gly Thr Tyr Val Trp	395		400		405
Lys Ile Phe Ser Gln Glu Thr Leu Thr Lys Ala Gln Ile Leu Lys	410		415		420
Leu Phe Leu Ser Tyr Asp Tyr Ala Val Lys Lys Pro Trp Leu Ala	425		430		435
Tyr Pro His Tyr Lys Pro Pro Glu Lys Cys Pro Ser Ile Ile Leu	440		445		450
His Asp Arg Leu Tyr Tyr Leu Asn Gly Ile Glu Cys Ala Ala Ser	455		460		465
Ala Met Glu Met Ser Ala Ile Ala Ala His Asn Ala Ala Leu Leu	470		475		480
Ala Tyr His Arg Trp Asn Gly His Thr Asp Met Ile Asp Gln Asp	485		490		495
Gly Leu Tyr Glu Lys Leu Lys Thr Glu Leu	500		505		

<210> 53
 <211> 728
 <212> DNA
 <213> Homo Sapien

<400> 53
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 agaagacatg atgctacact cagctttggg tctctgcctc ttactcgtca 100
 cagtttcttc caaccttgcc attgcaataa aaaaggaaaa gaggcctcct 150
 cagacactct caagaggatg gggagatgac atcacttggg tacaaactta 200
 tgaagaaggt ctcttttatg ctcaaaaaag taagaagcca ttaatgggta 250
 ttcacacct ggaggattgt caatactctc aagcactaaa gaaagtattt 300
 gcccaaatg aagaaataca agaaatggct cagaataagt tcacatgct 350

aaaccttatg catgaaacca ctgataagaa tttatcacct gatgggcaat 400
atgtgcctag aatcatgttt gtagaccctt ctttaacagt tagagctgac 450
atagctggaa gatactctaa cagattgtac acatatgagc ctggggattt 500
acccctattg atagaaaaca tgaagaaagc attaagactt attcagtcag 550
agctataaga gatgatggaa aaaagccttc acttcaaaga agtcaaattt 600
catgaagaaa acctctggca cattgacaaa tactaaatgt gcaagtatat 650
agattttgta atattactat ttagtttttt taatgtgttt gcaatagtct 700
tattaaaata aatgtttttt aaatctga 728

<210> 54
<211> 166
<212> PRT
<213> Homo Sapien

<400> 54
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1 5 10 15
Val Ser Ser Asn Leu Ala Ile Ala Ile Lys Lys Glu Lys Arg Pro
20 25 30
Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp Asp Ile Thr Trp Val
35 40 45
Gln Thr Tyr Glu Glu Gly Leu Phe Tyr Ala Gln Lys Ser Lys Lys
50 55 60
Pro Leu Met Val Ile His His Leu Glu Asp Cys Gln Tyr Ser Gln
65 70 75
Ala Leu Lys Lys Val Phe Ala Gln Asn Glu Glu Ile Gln Glu Met
80 85 90
Ala Gln Asn Lys Phe Ile Met Leu Asn Leu Met His Glu Thr Thr
95 100 105
Asp Lys Asn Leu Ser Pro Asp Gly Gln Tyr Val Pro Arg Ile Met
110 115 120
Phe Val Asp Pro Ser Leu Thr Val Arg Ala Asp Ile Ala Gly Arg
125 130 135
Tyr Ser Asn Arg Leu Tyr Thr Tyr Glu Pro Arg Asp Leu Pro Leu
140 145 150
Leu Ile Glu Asn Met Lys Lys Ala Leu Arg Leu Ile Gln Ser Glu
155 160 165

Leu

cggacgcgtg ggcgggcccgc cgggagggga ccggcggcgg catgggcccgg 50
 gggccctggg atgcggggccc gtctcgccgc ctgtcgccgc tgttgctgct 100
 gctcggcctg gcccgcggcg ccgcgggagc gccggggccc gacggtttag 150
 acgtctgtgc cacttgccat gaacatgccca catgccagca aagagaaggg 200
 aagaagatct gtatttgcaa ctatggattt gtaggggaacg ggaggactca 250
 gtgtgttgat aaaaatgagt gccagtttgg agccactctt gtctgtggga 300
 accacacatc ttgccacaac acccccgggg gcttctattg catttgccctg 350
 gaaggatatc gagccacaaa caacaacaag acattcattc ccaacgatgg 400
 caccttttgt acagacatag atgagtgtga agtttctggc ctgtgcaggc 450
 atggagggcg atgcgtgaac actcatggga gctttgaatg ctactgtatg 500
 gatggatact tgccaaggaa tggacctgaa cctttccacc cgaccaccga 550
 tgccacatca tgcacagaaa tagactgtgg taccctcct gaggttccag 600
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Ser	Arg	Leu	Gly	Gly	Val	Ala	Arg	Tyr	Val	Cys	Gln	Glu	Gly	Phe	260	265	270
Glu	Ser	Pro	Gly	Gly	Lys	Ile	Thr	Ser	Val	Cys	Thr	Glu	Lys	Gly	275	280	285
Thr	Trp	Arg	Glu	Ser	Thr	Leu	Thr	Cys	Thr	Glu	Ile	Leu	Thr	Lys	290	295	300
Ile	Asn	Asp	Val	Ser	Leu	Phe	Asn	Asp	Thr	Cys	Val	Arg	Trp	Gln	305	310	315
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Ala	Leu	Tyr	Pro	Gly	Thr	Asn	Tyr	Thr	Val	Asn	Ile	Ser	Thr	Ala	365	370	375
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Phe	Asn	Glu	Thr	Cys	Leu	Lys	Leu	Asn	Arg	Arg	Ser	Arg	Lys	Val	410	415	420
Gly	Ser	Glu	His	Met	Tyr	Gln	Phe	Thr	Val	Leu	Gly	Gln	Arg	Trp	425	430	435
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Arg	Glu	Gln	Val	Pro	Val	Val	Cys	Leu	Asp	Leu	Tyr	Pro	Thr	Thr	455	460	465
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Ser	Ile	Lys	Thr	Ala	Asp	Met	Glu	Glu	Met	Tyr	Leu	Phe	His	Ile	515	520	525
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Pro Pro Leu Pro	Glu Val Glu Phe Phe	Thr Val His Arg Gly	Pro		
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Leu Pro Arg Leu	Arg Leu Arg Lys Ala	Lys Glu Lys Asn Gly	Pro		
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Ile Ser Ser Tyr	Gln Val Leu Val Leu	Pro Leu Ala Leu Gln	Ser		
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Thr Phe Ser Cys	Asp Ser Glu Gly Ala	Ser Ser Phe Phe Ser	Asn		
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Asp Val Pro Asp	Asp Ala Met Glu Ile	Pro Ile Gly Asp Arg	Leu		
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Tyr Tyr Gly Glu	Tyr Tyr Asn Ala Pro	Leu Lys Arg Gly Ser	Asp		
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Arg His Ser Cys	Ala Val Trp Ala Gln	Val Lys Asp Ser Ser	Leu		
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<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 60

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<210> 61

<211> 43

<212> DNA

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<220>

<223> Synthetic oligonucleotide probe

<400> 61

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<210> 62

<211> 2015

<212> DNA

<213> Homo Sapien

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 <211> 482
 <212> PRT
 <213> Homo Sapien

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Ser	Ala	Glu	Thr	Ser 65	Ser	Arg	Ala	Ser	Thr 70	Pro	Ala	Gly	Pro	Ile 75
Pro	Glu	Ala	Glu	Thr 80	Arg	Gly	Ala	Lys	Arg 85	Ile	Ser	Pro	Ala	Arg 90
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Ile	Ala	Thr	Ser	Val 110	Glu	Thr	Ser	Ala	Ala 115	Ser	Gly	Ser	Pro	Glu 120
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Glu	Glu	Ala	Ile	Phe 140	Asp	Thr	Leu	Cys	Thr 145	Asp	Asp	Ser	Ser	Glu 150
Glu	Ala	Lys	Thr	Leu 155	Thr	Met	Asp	Ile	Leu 160	Thr	Leu	Ala	His	Thr 165
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Asp	Gly	Pro	His	Pro 185	Val	Ile	Thr	Pro	Ser 190	Arg	Ala	Ser	Glu	Ser 195
Ser	Ala	Ser	Ser	Asp 200	Gly	Pro	His	Pro	Val 205	Ile	Thr	Pro	Ser	Arg 210
Ala	Ser	Glu	Ser	Ser 215	Ala	Ser	Ser	Asp	Gly 220	Pro	His	Pro	Val	Ile 225
Thr	Pro	Ser	Trp	Ser 230	Pro	Gly	Ser	Asp	Val 235	Thr	Leu	Leu	Ala	Glu 240
Ala	Leu	Val	Thr	Val 245	Thr	Asn	Ile	Glu	Val 250	Ile	Asn	Cys	Ser	Ile 255
Thr	Glu	Ile	Glu	Thr 260	Thr	Thr	Ser	Ser	Ile 265	Pro	Gly	Ala	Ser	Asp 270
Ile	Asp	Leu	Ile	Pro 275	Thr	Glu	Gly	Val	Lys 280	Ala	Ser	Ser	Thr	Ser 285
Asp	Pro	Pro	Ala	Leu 290	Pro	Asp	Ser	Thr	Glu 295	Ala	Lys	Pro	His	Ile 300
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Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro
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Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr
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Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu
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Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val
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Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly
				380					385					390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro
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Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr
				410					415					420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro
				425					430					435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr
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Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met
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Gln Thr

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 <212> DNA
 <213> Homo Sapien

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<210> 65
 <211> 364
 <212> PRT
 <213> Homo Sapien

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 Gln Phe Leu Gly Leu Asp Lys Ala Pro Ser Pro Gln Lys Phe Gln
 35 40 45
 Pro Val Pro Tyr Ile Leu Lys Lys Ile Phe Gln Asp Arg Glu Ala
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 Leu Gly Val Arg Gly Asn Val Leu Arg Phe Leu Pro Asp Gln Gly

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<212> PRT
<213> Homo Sapien

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35 40 45
Lys Asn Ile Met Val Ile Phe Glu Thr Ile Tyr Cys Asn Arg Lys
50 55 60

Glu Val Ile Ala Val Pro Lys Asn Gly Ser Met Ile Cys Leu Asp
65 70 75
Pro Asp Ala Pro Trp Val Lys Ala Thr Val Gly Pro Ile Thr Asn
80 85 90
Arg Phe Leu Pro Glu Asp Leu Lys Gln Lys Glu Phe Pro Pro Ala
95 100 105
Met Lys Leu Leu Tyr Ser Val Glu His Glu Lys Pro Leu Tyr Leu
110 115 120
Ser Phe Gly Arg Pro Glu Asn Lys Arg Ile Phe Pro Phe Pro Ile
125 130 135
Arg Glu Thr Ser Arg His Phe Ala Asp Leu Ala His Asn Ser Asp
140 145 150
Arg Asn Phe Leu Arg Asp Ser Ser Glu Val Ser Leu Thr Gly Ser
155 160 165

Asp Ala

<210> 79
<211> 798
<212> DNA
<213> Homo Sapien

<220>
<221> unsure
<222> 794
<223> unknown base

<400> 79
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tttggtcatcc ccaggaccca aggcagtgat ggaggggctc aggactgttg 100
cctcaagtac agccaaagga agattcccgc caagggttgtc cgcagctacc 150
ggaagcagga accaagctta ggctgctcca tcccagctat cctggttcttg 200
ccccgcaagc gctctcaggc agagctatgt gcagacccaa aggagctctg 250
gggtgcagcag ctgatgcagc atctggacaa gacaccatcc ccacagaaac 300
cagcccaggg ctgcaggaag gacagggggg cctccaagac tggcaagaaa 350
ggaaagggct ccaaaggctg caagaggact gagcggtcac agaccctaa 400
agggccatag ccagtgagc agcctggagc cctggagacc ccaccagcct 450
caccagcgt tgaagcctga acccaagatg caagaaggag gctatgctca 500
ggggcctgg agcagccacc ccatgctggc cttgccacac tctttctcct 550
gctttaacca ccccatctgc attcccagct ctaccctgca tggctgagct 600

<223> Synthetic oligonucleotide probe

<400> 82
gaccctaaa gggccatag 19

<210> 83
<211> 924
<212> DNA
<213> Homo Sapien

<400> 83
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cgggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaatt 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300
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attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaaatcc 500
ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
aatgtttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
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tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
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ataaattcca tattttacct atga 924

<210> 84
<211> 177
<212> PRT
<213> Homo Sapien

<400> 84
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Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
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Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
35 40 45
Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
50 55 60
Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
65 70 75
Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
80 85 90
Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
95 100 105
Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
110 115 120
Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
125 130 135
Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
140 145 150
Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala
155 160 165
Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 85
<211> 2137
<212> DNA
<213> Homo Sapien

<400> 85
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tgggcggggt caccctgggt gggacaagaa gccgccgcct gcctgccccg 150
gcccggggag ggggctgggg ctggggccgg aggcgggggtg tgagtgggtg 200
tgtgcggggg gcggaggctt gatgcaatcc cgataagaaa tgctcgggtg 250
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cggcccggag ccgcccgcgc gtcagagcag gagcgctgcg tccaggatct 350
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gtcgccgccc agcctcccg cccccatcg ccggagctgc gccgagagcc 450
ccagggaggt gccatgcgga gcgggtgtgt ggtgggtccac gtatggatcc 500

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ctggagatca	aggcagtcgc	tctgcggacc	gtggccatca	agggcgtgca	750
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<210> 86
 <211> 216
 <212> PRT
 <213> Homo Sapien

<400> 86
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 20 25 30
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 35 40 45
 His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu 60
 50 55 60
 Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser 75
 65 70 75
 Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val 90
 80 85 90
 Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala 105
 95 100 105
 Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys 120
 110 115 120
 Ala Phe Glu Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg 135
 125 130 135
 Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln 150
 140 145 150
 Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe 165
 155 160 165
 Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg 180
 170 175 180
 Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp 195
 185 190 195
 Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg 210
 200 205 210
 Ser Pro Ser Phe Glu Lys 215

<210> 87
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 87
 atccgcccag atggctacaa tgtgta 26

<210> 88
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 88
 gcctcccggg ctcctgagc agtgccaaac agcggcagtg ta 42

<210> 89
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 89
 ccagtccggg gacaagccca aa 22

<210> 90
 <211> 1857
 <212> DNA
 <213> Homo Sapien

<400> 90
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 tggcgatcct gttgtgctcc ctggcattgg gcagtgttac agtgcactct 150
 tctgaacctg aagtcagaat tcctgagaat aatcctgtga agttgtcctg 200
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 aagcctacag ttaacatccc ctctctgcc accattggga accgggcagt 500

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agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaaa 1850
aaaaaaaa 1857

<210> 91
<211> 299

Lys Gly Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala
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Arg Ser Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
290 295

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcgcggagct gtgttctgtt tccc 24

<210> 93
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
tgatcgcgat ggggacaaag gcgcaagctc gagaggaaac tgttgtgcct 50

<210> 94
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 94
acacctggtt caaagatggg 20

<210> 95
<211> 24
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 95
taggaagagt tgctgaaggc acgg 24

<210> 96
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ttgccttact caggtgctac 20

<210> 97
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 97
actcagcagt ggtaggaaag 20

<210> 98
<211> 1200
<212> DNA
<213> Homo Sapien

<400> 98
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gtgagggacc agggcgccat gaccgaccag ctgagcaggc ggcagatccg 150
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<210> 99
 <211> 205
 <212> PRT
 <213> Homo Sapien

<400> 99
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 35 40 45
 Leu Tyr Ser Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg
 50 55 60
 Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu
 65 70 75
 Ile Val Glu Thr Asp Thr Phe Gly Ser Arg Val Arg Ile Lys Gly
 80 85 90
 Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
 95 100 105
 Ile Gly Lys Pro Ser Gly Lys Ser Lys Asp Cys Val Phe Thr Glu
 110 115 120
 Ile Val Leu Glu Asn Asn Tyr Thr Ala Phe Gln Asn Ala Arg His
 125 130 135
 Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln
 140 145 150
 Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys
 155 160 165
 Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
 170 175 180
 Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr Arg Arg Thr
 185 190 195
 Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
 200 205

<210> 100
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 100
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<210> 101
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 101
 ccggtgacct gcacgtgctt gccca 24

<210> 102
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<220>
 <221> unsure
 <222> 21
 <223> unknown base

<400> 102
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<210> 103
 <211> 1679
 <212> DNA
 <213> Homo Sapien

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 aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200
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<210> 104
<211> 344
<212> PRT
<213> Homo Sapien
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<400> 104

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Val	Arg	Ser	Gly	Asp	Ala	Thr	Phe	Pro	Lys	Ala	Met	Asp	Asn	Val
				35					40					45
Thr	Val	Arg	Gln	Gly	Glu	Ser	Ala	Thr	Leu	Arg	Cys	Thr	Ile	Asp
				50					55					60
Asn	Arg	Val	Thr	Arg	Val	Ala	Trp	Leu	Asn	Arg	Ser	Thr	Ile	Leu
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Tyr	Ala	Gly	Asn	Asp	Lys	Trp	Cys	Leu	Asp	Pro	Arg	Val	Val	Leu
				80					85					90
Leu	Ser	Asn	Thr	Gln	Thr	Gln	Tyr	Ser	Ile	Glu	Ile	Gln	Asn	Val
				95					100					105
Asp	Val	Tyr	Asp	Glu	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr	Asp
				110					115					120
Asn	His	Pro	Lys	Thr	Ser	Arg	Val	His	Leu	Ile	Val	Gln	Val	Ser
				125					130					135
Pro	Lys	Ile	Val	Glu	Ile	Ser	Ser	Asp	Ile	Ser	Ile	Asn	Glu	Gly
				140					145					150
Asn	Asn	Ile	Ser	Leu	Thr	Cys	Ile	Ala	Thr	Gly	Arg	Pro	Glu	Pro
				155					160					165
Thr	Val	Thr	Trp	Arg	His	Ile	Ser	Pro	Lys	Ala	Val	Gly	Phe	Val
				170					175					180
Ser	Glu	Asp	Glu	Tyr	Leu	Glu	Ile	Gln	Gly	Ile	Thr	Arg	Glu	Gln
				185					190					195
Ser	Gly	Asp	Tyr	Glu	Cys	Ser	Ala	Ser	Asn	Asp	Val	Ala	Ala	Pro
				200					205					210
Val	Val	Arg	Arg	Val	Lys	Val	Thr	Val	Asn	Tyr	Pro	Pro	Tyr	Ile
				215					220					225
Ser	Glu	Ala	Lys	Gly	Thr	Gly	Val	Pro	Val	Gly	Gln	Lys	Gly	Thr
				230					235					240
Leu	Gln	Cys	Glu	Ala	Ser	Ala	Val	Pro	Ser	Ala	Glu	Phe	Gln	Trp
				245					250					255
Tyr	Lys	Asp	Asp	Lys	Arg	Leu	Ile	Glu	Gly	Lys	Lys	Gly	Val	Lys
				260					265					270
Val	Glu	Asn	Arg	Pro	Phe	Leu	Ser	Lys	Leu	Ile	Phe	Phe	Asn	Val
				275					280					285

Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys
 290 295 300
 Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala
 305 310 315
 Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val
 320 325 330
 Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe
 335 340

<210> 105
 <211> 1734
 <212> DNA
 <213> Homo Sapien

<400> 105
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 gaccagagg gagggaggac agggagtcgg aaggaggagg acagaggagg 100
 gcacagagac gcagagcaag ggcggcaagg aggagaccct ggtgggagga 150
 agacactctg gagagagagg gggctgggca gagatgaagt tccaggggcc 200
 cctggcctgc ctctgctgg ccctctgcct gggcagtggg gaggctggcc 250
 ccctgcagag cggagaggaa agcactggga caaatattgg ggaggccctt 300
 ggacatggcc tgggagacgc cctgagcgaa ggggtgggaa aggccattgg 350
 caaagaggcc ggaggggcag ctggctctaa agtcagttag gcccttggcc 400
 aagggaccag agaagcagtt ggcactggag tcaggcaggt tccaggcttt 450
 ggcgcagcag atgctttggg caacaggggc ggggaagcag cccatgctct 500
 gggaaacact gggcacgaga ttggcagaca ggcagaagat gtcattcgac 550
 acggagcaga tgctgtccgc ggctcctggc aggggggtgcc tggccacagt 600
 ggtgcttggg aaacttctgg aggccatggc atctttggct ctcaagggtg 650
 ccttggaggc cagggccagg gcaatcctgg aggtctgggg actccgtggg 700
 tccacggata ccccggaac tcagcaggca gctttggaat gaatcctcag 750
 ggagctccct ggggtcaagg aggcaatgga gggccaccaa actttgggac 800
 caacactcag ggagctgtgg ccagcctgg ctatgggttca gtgagagcca 850
 gcaaccagaa tgaagggtgc acgaatcccc caccatctgg ctgaggtgga 900
 ggctccagca actctggggg aggcagcggc tcacagtcgg gcagcagtgg 950
 cagtggcagc aatgggtgaca acaacaatgg cagcagcagt ggtggcagca 1000

Ile	Arg	His	Gly	Ala	Asp	Ala	Val	Arg	Gly	Ser	Trp	Gln	Gly	Val
				125					130					135
Pro	Gly	His	Ser	Gly	Ala	Trp	Glu	Thr	Ser	Gly	Gly	His	Gly	Ile
				140					145					150
Phe	Gly	Ser	Gln	Gly	Gly	Leu	Gly	Gly	Gln	Gly	Gln	Gly	Asn	Pro
				155					160					165
Gly	Gly	Leu	Gly	Thr	Pro	Trp	Val	His	Gly	Tyr	Pro	Gly	Asn	Ser
				170					175					180
Ala	Gly	Ser	Phe	Gly	Met	Asn	Pro	Gln	Gly	Ala	Pro	Trp	Gly	Gln
				185					190					195
Gly	Gly	Asn	Gly	Gly	Pro	Pro	Asn	Phe	Gly	Thr	Asn	Thr	Gln	Gly
				200					205					210
Ala	Val	Ala	Gln	Pro	Gly	Tyr	Gly	Ser	Val	Arg	Ala	Ser	Asn	Gln
				215					220					225
Asn	Glu	Gly	Cys	Thr	Asn	Pro	Pro	Pro	Ser	Gly	Ser	Gly	Gly	Gly
				230					235					240
Ser	Ser	Asn	Ser	Gly	Gly	Gly	Ser	Gly	Ser	Gln	Ser	Gly	Ser	Ser
				245					250					255
Gly	Ser	Gly	Ser	Asn	Gly	Asp	Asn	Asn	Asn	Gly	Ser	Ser	Ser	Gly
				260					265					270
Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Gly	Ser
				275					280					285
Ser	Gly	Gly	Ser	Ser	Gly	Gly	Ser	Ser	Gly	Asn	Ser	Gly	Gly	Ser
				290					295					300
Arg	Gly	Asp	Ser	Gly	Ser	Glu	Ser	Ser	Trp	Gly	Ser	Ser	Thr	Gly
				305					310					315
Ser	Ser	Ser	Gly	Asn	His	Gly	Gly	Ser	Gly	Gly	Gly	Asn	Gly	His
				320					325					330
Lys	Pro	Gly	Cys	Glu	Lys	Pro	Gly	Asn	Glu	Ala	Arg	Gly	Ser	Gly
				335					340					345
Glu	Ser	Gly	Ile	Gln	Gly	Phe	Arg	Gly	Gln	Gly	Val	Ser	Ser	Asn
				350					355					360
Met	Arg	Glu	Ile	Ser	Lys	Glu	Gly	Asn	Arg	Leu	Leu	Gly	Gly	Ser
				365					370					375
Gly	Asp	Asn	Tyr	Arg	Gly	Gln	Gly	Ser	Ser	Trp	Gly	Ser	Gly	Gly
				380					385					390
Gly	Asp	Ala	Val	Gly	Gly	Val	Asn	Thr	Val	Asn	Ser	Glu	Thr	Ser
				395					400					405

Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser
 410 415 420
 Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg
 425 430 435
 Ser Ser Arg Ile Pro
 440

<210> 107
 <211> 918
 <212> DNA
 <213> Homo Sapien

<400> 107
 agccaggcag cacatcacag cgggaggagc tgtcccagggt ggcccagctc 50
 agcaatggca atggggggtcc ccagagtcac tctgctctgc ctctttgggg 100
 ctgcgctctg cctgacaggg tcccaagccc tgcagtgcta cagctttgag 150
 cacacctact ttggcccctt tgacctcagg gccatgaagc tgcccagcat 200
 ctectgtect catgagtgtt ttgaggctat cctgtctctg gacaccgggt 250
 atcgcgcgcc ggtgacctg gtgcggaagg gctgctggac cgggcctcct 300
 gcggggccaga cgcaatcgaa cccggacgcg ctgccgccag actactcggg 350
 ggtgcgcggc tgcacaactg acaaatgcaa cgcccacctc atgactcatg 400
 acgccctccc caacctgagc caagcaccgc acccgccgac gctcagcggc 450
 gccgagtgtt acgcctgtat cgggggtccac caggatgact gcgctatcgg 500
 cagggtccga cgagtccagt gtcaccagga ccagaccgcc tgcttccagg 550
 gcagtggcag aatgacagtt ggcaatttct cagtccctgt gtacatcaga 600
 acctgccacc ggccctcctg caccaccgag ggcaccacca gccctggac 650
 agccatcgac ctccagggtt cctgctgtga ggggtacctc tgcaacagga 700
 aatccatgac ccagcccttc accagtgtt cagccaccac ccctccccga 750
 gcactacagg tcctggccct gctcctccca gtcctcctgc tgggtggggct 800
 ctgagcatag accgcccctc caggatgctg gggacagggc tcacacacct 850
 cattcttgct gcttcagccc ctatcacata gctcactgga aaatgatgtt 900
 aaagtaagaa ttgcaaaa 918

<210> 108
 <211> 251
 <212> PRT
 <213> Homo Sapien

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 cgcgcagcct cggcacctgc aggtccgtgc gtcccgcggc tggcgcccct 100
 gactccgtcc cggccaggga gggccatgat ttcctcccg gggcccctgg 150
 tgaccaactt gctgcggttt ttgttcctgg ggctgagtgc cctcgcgccc 200
 cctcgcggg cccagctgca actgcacttg cccgccaacc ggttgcaggc 250
 ggtggaggga ggggaagtgg tgcttccagc gtggtacacc ttgcacgggg 300
 aggtgtcttc atcccagcca tgggaggtgc cctttgtgat gtggttcttc 350
 aaacagaaag aaaaggagga tcaggtgttg tcctacatca atggggtcac 400
 aacaagcaaa cctggagtat ccttgggtcta ctccatgccc tcccgggaacc 450
 tgtccctgcg gctggagggt ctccaggaga aagactctgg cccctacagc 500
 tgctccgtga atgtgcaaga caaacaaggc aaatctaggg gccacagcat 550
 caaaacctta gaactcaatg tactgggttc tccagctcct ccatactgcc 600
 gtctccaggg tgtgccccat gtgggggcaa acgtgaccct gagctgccag 650
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 atccttccag actttctttg caccagcatt agatgtcatc cgtgggtctt 750
 taagcctcac caacctttcg tcttccatgg ctggagtcta tgtctgcaag 800
 gccacaaatg aggtgggcac tgcccaatgt aatgtgacgc tggaagtgag 850
 cacagggcct ggagctgcag tggttgctgg agctgttggtg ggtaccctgg 900
 ttggactggg gttgctggct gggctggctc tcttgtacca ccgccggggc 950
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 gccctcacca agactgcca cgacagatgg ggcaccct caaccaatat 1200
 ccccatccc tgggtggggt tcttctctg gcttgagccg catgggtgct 1250
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 accccaccac tcattggcta aaggatttgg ggtctctcct tcctataagg 1350
 gtcacctcta gcacagaggc ctgagtcatg ggaaagagtc acactcctga 1400
 cccttagtac tctgccccca cctctcttta ctgtgggaaa accatctcag 1450

Pro	Ala	Val	Gln	Tyr	Gln	Trp	Asp	Arg	Gln	Leu	Pro	Ser	Phe	Gln	
			185						190					195	
Thr	Phe	Phe	Ala	Pro	Ala	Leu	Asp	Val	Ile	Arg	Gly	Ser	Leu	Ser	
			200						205					210	
Leu	Thr	Asn	Leu	Ser	Ser	Ser	Met	Ala	Gly	Val	Tyr	Val	Cys	Lys	
			215						220					225	
Ala	His	Asn	Glu	Val	Gly	Thr	Ala	Gln	Cys	Asn	Val	Thr	Leu	Glu	
			230						235					240	
Val	Ser	Thr	Gly	Pro	Gly	Ala	Ala	Val	Val	Ala	Gly	Ala	Val	Val	
			245						250					255	
Gly	Thr	Leu	Val	Gly	Leu	Gly	Leu	Leu	Ala	Gly	Leu	Val	Leu	Leu	
			260						265					270	
Tyr	His	Arg	Arg	Gly	Lys	Ala	Leu	Glu	Glu	Pro	Ala	Asn	Asp	Ile	
			275						280					285	
Lys	Glu	Asp	Ala	Ile	Ala	Pro	Arg	Thr	Leu	Pro	Trp	Pro	Lys	Ser	
			290						295					300	
Ser	Asp	Thr	Ile	Ser	Lys	Asn	Gly	Thr	Leu	Ser	Ser	Val	Thr	Ser	
			305						310					315	
Ala	Arg	Ala	Leu	Arg	Pro	Pro	His	Gly	Pro	Pro	Arg	Pro	Gly	Ala	
			320						325					330	
Leu	Thr	Pro	Thr	Pro	Ser	Leu	Ser	Ser	Gln	Ala	Leu	Pro	Ser	Pro	
			335						340					345	
Arg	Leu	Pro	Thr	Thr	Asp	Gly	Ala	His	Pro	Gln	Pro	Ile	Ser	Pro	
			350						355					360	
Ile	Pro	Gly	Gly	Val	Ser	Ser	Ser	Gly	Leu	Ser	Arg	Met	Gly	Ala	
			365						370					375	
Val	Pro	Val	Met	Val	Pro	Ala	Gln	Ser	Gln	Ala	Gly	Ser	Leu	Val	
			380						385					390	

<210> 111
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 111
 aggtctcca ggagaaagac tc 22

<210> 112
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 112
attgtgggcc ttgcagacat agac 24

<210> 113
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 113
ggccacagca tcaaacctt agaactcaat gtactgggtc ctccagctcc 50

<210> 114
<211> 2479
<212> DNA
<213> Homo Sapien

<400> 114
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gagacagcag ggagattatt ttaccatacg ccctcaggac gttccctcta 150
gctggagttc tggacttcaa cagaacccca tccagtcatt ttgattttgc 200
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tgtctactgt aatgagcgaa gcttgacctc agtgccctctt gggatcccgg 450
agggcgtaac cgtactctac ctccacaaca accaaattaa taatgctgga 500
tttcctgcag aactgcacaa tgtacagtcg gtgcacacgg tctacctgta 550
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gcccagctct tgaagcttga agagctgcac ctggatgaca actccatata 700
cacagtgggg gtggaagacg gggccttccg ggaggctatt agcctcaaata 750
tgttggtttt gtctaagaat cacctgagca gtgtgcctgt tgggcttcc 800
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cgacatggcc ttccagaata tcacgagctt ggagcgtctt attgtggacg 900

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accaagctca	aggaattttc	aattgtacgt	aattcgctgt	cccaccctcc	1000
tcccgatctc	ccaggtagcg	atctgatcag	gctctatttg	caggacaacc	1050
agataaacca	cattcctttg	acagccttct	caaatctgcg	taagctggaa	1100
cggctggata	tatccaacaa	ccaactgcg	atgctgactc	aaggggtttt	1150
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ggggatggcc	gtcaggggaat	taaatatgaa	tcttttgtcc	tgtcccacca	1350
cgacccccgg	cctgcctctc	ttcaccccag	ccccaagtac	agcttctccg	1400
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gcctccaact	cctaccacat	cgaaacttec	cacgattcct	gactgggatg	1500
gcagagaaag	agtgacccca	cctattttctg	aacggatcca	gctctctatc	1550
catttttgtga	atgatacttc	cattcaagtc	agctggctct	ctctcttcac	1600
cgtgatggca	tacaaactca	catgggtgaa	aatgggccac	agtttagtag	1650
ggggcatcgt	tcaggagcgc	atagtcagcg	gtgagaagca	acacctgagc	1700
ctggttaact	tagagccccg	atccacctat	cggatttggt	tagtgccact	1750
ggatgcTTTT	aactaccgcg	cggtagaaga	caccatttgt	tcagaggcca	1800
ccacccatgc	ctcctatctg	aacaacggca	gcaacacagc	gtccagccat	1850
gagcagacga	cgtcccacag	catgggctcc	ccctttctgc	tggcgggctt	1900
gatcgggggc	gcggtgatat	ttgtgctgg	ggtcttgctc	agcgtctttt	1950
gctggcatat	gcacaaaaag	gggcgctaca	cctcccagaa	gtggaaatac	2000
aaccgggggc	ggcggaagaa	tgattattgc	gaggcaggca	ccaagaagga	2050
caactccatc	ctggagatga	cagaaaccag	tttccagatc	gtctccttaa	2100
ataacgatca	actccttaaa	ggagatttca	gactgcagcc	catttacacc	2150
ccaaatgggg	gcattaatta	cacagactgc	catatcccca	acaacatgcg	2200
atactgcaac	agcagcgtgc	cagacctgga	gcactgccat	acgtgacagc	2250
cagaggccca	gcgttatcaa	ggcggacaat	tagactcttg	agaacacact	2300
cgtgtgtgca	cataaagaca	cgcagattac	atttgataaa	tgttacacag	2350

atgcatttgcgcatttgaat actctgtgaat ttatacgggtg tactatatataa 2400

tgggattttaa aaaaagtgct atctttttcta tttcaagtta attacaaaca 2450

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<210> 115

<211> 660

<212> PRT

<213> Homo Sapien

<400> 115

Met Gly Leu Gln Thr Thr Lys Trp Pro Ser His Gly Ala Phe Phe
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Leu Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val
20 25 30

Ser Lys Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn
35 40 45

Phe Val Tyr Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly
50 55 60

Ile Pro Glu Gly Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile
65 70 75

Asn Asn Ala Gly Phe Pro Ala Glu Leu His Asn Val Gln Ser Val
80 85 90

His Thr Val Tyr Leu Tyr Gly Asn Gln Leu Asp Glu Phe Pro Met
95 100 105

Asn Leu Pro Lys Asn Val Arg Val Leu His Leu Gln Glu Asn Asn
110 115 120

Ile Gln Thr Ile Ser Arg Ala Ala Leu Ala Gln Leu Leu Lys Leu
125 130 135

Glu Glu Leu His Leu Asp Asp Asn Ser Ile Ser Thr Val Gly Val
140 145 150

Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser Leu Lys Leu Leu Phe
155 160 165

Leu Ser Lys Asn His Leu Ser Ser Val Pro Val Gly Leu Pro Val
170 175 180

Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile Ala Val Ile
185 190 195

Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg Leu Ile
200 205 210

Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly Thr
215 220 225

Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn

				230					235					240
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile
				245					250					255
Arg	Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr
				260					265					270
Ala	Phe	Ser	Asn	Leu	Arg	Lys	Leu	Glu	Arg	Leu	Asp	Ile	Ser	Asn
				275					280					285
Asn	Gln	Leu	Arg	Met	Leu	Thr	Gln	Gly	Val	Phe	Asp	Asn	Leu	Ser
				290					295					300
Asn	Leu	Lys	Gln	Leu	Thr	Ala	Arg	Asn	Asn	Pro	Trp	Phe	Cys	Asp
				305					310					315
Cys	Ser	Ile	Lys	Trp	Val	Thr	Glu	Trp	Leu	Lys	Tyr	Ile	Pro	Ser
				320					325					330
Ser	Leu	Asn	Val	Arg	Gly	Phe	Met	Cys	Gln	Gly	Pro	Glu	Gln	Val
				335					340					345
Arg	Gly	Met	Ala	Val	Arg	Glu	Leu	Asn	Met	Asn	Leu	Leu	Ser	Cys
				350					355					360
Pro	Thr	Thr	Thr	Pro	Gly	Leu	Pro	Leu	Phe	Thr	Pro	Ala	Pro	Ser
				365					370					375
Thr	Ala	Ser	Pro	Thr	Thr	Gln	Pro	Pro	Thr	Leu	Ser	Ile	Pro	Asn
				380					385					390
Pro	Ser	Arg	Ser	Tyr	Thr	Pro	Pro	Thr	Pro	Thr	Thr	Ser	Lys	Leu
				395					400					405
Pro	Thr	Ile	Pro	Asp	Trp	Asp	Gly	Arg	Glu	Arg	Val	Thr	Pro	Pro
				410					415					420
Ile	Ser	Glu	Arg	Ile	Gln	Leu	Ser	Ile	His	Phe	Val	Asn	Asp	Thr
				425					430					435
Ser	Ile	Gln	Val	Ser	Trp	Leu	Ser	Leu	Phe	Thr	Val	Met	Ala	Tyr
				440					445					450
Lys	Leu	Thr	Trp	Val	Lys	Met	Gly	His	Ser	Leu	Val	Gly	Gly	Ile
				455					460					465
Val	Gln	Glu	Arg	Ile	Val	Ser	Gly	Glu	Lys	Gln	His	Leu	Ser	Leu
				470					475					480
Val	Asn	Leu	Glu	Pro	Arg	Ser	Thr	Tyr	Arg	Ile	Cys	Leu	Val	Pro
				485					490					495
Leu	Asp	Ala	Phe	Asn	Tyr	Arg	Ala	Val	Glu	Asp	Thr	Ile	Cys	Ser
				500					505					510
Glu	Ala	Thr	Thr	His	Ala	Ser	Tyr	Leu	Asn	Asn	Gly	Ser	Asn	Thr
				515					520					525

Ala	Ser	Ser	His	Glu	Gln	Thr	Thr	Ser	His	Ser	Met	Gly	Ser	Pro
				530					535					540
Phe	Leu	Leu	Ala	Gly	Leu	Ile	Gly	Gly	Ala	Val	Ile	Phe	Val	Leu
				545					550					555
Val	Val	Leu	Leu	Ser	Val	Phe	Cys	Trp	His	Met	His	Lys	Lys	Gly
				560					565					570
Arg	Tyr	Thr	Ser	Gln	Lys	Trp	Lys	Tyr	Asn	Arg	Gly	Arg	Arg	Lys
				575					580					585
Asp	Asp	Tyr	Cys	Glu	Ala	Gly	Thr	Lys	Lys	Asp	Asn	Ser	Ile	Leu
				590					595					600
Glu	Met	Thr	Glu	Thr	Ser	Phe	Gln	Ile	Val	Ser	Leu	Asn	Asn	Asp
				605					610					615
Gln	Leu	Leu	Lys	Gly	Asp	Phe	Arg	Leu	Gln	Pro	Ile	Tyr	Thr	Pro
				620					625					630
Asn	Gly	Gly	Ile	Asn	Tyr	Thr	Asp	Cys	His	Ile	Pro	Asn	Asn	Met
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Phe	Pro	Asp	Val	Arg	Lys	Val	Lys	Val	Val	Val	Asn	Phe	Ala	Pro
				215					220					225
Thr	Ile	Gln	Glu	Ile	Lys	Ser	Gly	Thr	Val	Thr	Pro	Gly	Arg	Ser
				230					235					240
Gly	Leu	Ile	Arg	Cys	Glu	Gly	Ala	Gly	Val	Pro	Pro	Pro	Ala	Phe
				245					250					255
Glu	Trp	Tyr	Lys	Gly	Glu	Lys	Lys	Leu	Phe	Asn	Gly	Gln	Gln	Gly
				260					265					270
Ile	Ile	Ile	Gln	Asn	Phe	Ser	Thr	Arg	Ser	Ile	Leu	Thr	Val	Thr
				275					280					285
Asn	Val	Thr	Gln	Glu	His	Phe	Gly	Asn	Tyr	Thr	Cys	Val	Ala	Ala
				290					295					300
Asn	Lys	Leu	Gly	Thr	Thr	Asn	Ala	Ser	Leu	Pro	Leu	Asn	Pro	Pro
				305					310					315
Ser	Thr	Ala	Gln	Tyr	Gly	Ile	Thr	Gly	Ser	Ala	Asp	Val	Leu	Phe
				320					325					330
Ser	Cys	Trp	Tyr	Leu	Val	Leu	Thr	Leu	Ser	Ser	Phe	Thr	Ser	Ile
				335					340					345

Phe Tyr Leu Lys Asn Ala Ile Leu Gln
350

<210> 131
<211> 823
<212> DNA
<213> Homo Sapien

<400> 131
atagtagaag aatgtctctg aaattactgg atgagtttca gtcatacttt 50
cacatgggca caatttcaca ttcaagctcc ttatcctagg ctaattttat 100
attatgttaa atcacttggt tttgttctca cggcttcctg cctgctatag 150
gcataattac gaggaagcag aacttctcca gaagcaagcg cacatgcgtt 200
ccaaaataag agcaaattcg ctctaaacac aggaaaagac ctgaagcttt 250
aattaagggg ttacatccaa cccagagcg cttttgtggg cactgattgc 300
tccagcttct gcgtcactgc gcgaggggaag agggaagagg atccaggcgt 350
tagacatgta tagacacaaa aacagctgga gattgggctt aaaataccca 400
ccaagctcca aagaagagac ccaagtcccc aaaacattga ttccagggct 450
gccaggaagg aagagcagca gcaggggtgg agagaagctc cagtcagccc 500
acaagatgcc attgtcccc ggctcctgc tgctgctgct ctccggggcc 550
acggccaccg ctgccctgcc cctggagggt ggccccaccg gccgagacag 600
cgagcatatg caggaagcgg caggaataag gaaaagcagc ctctgactt 650
tcctcgcttg gtggtttgag tggacctccc aggccagtgc cggggccctc 700
ataggagagg aagctcggga ggtggccagg cggcaggaag gcgcaccccc 750
ccagcaatcc gcgcgccggg acagaatgcc ctgcaggaac ttcttctgga 800
agaccttctc ctctgcaaa tag 823

<210> 132
<211> 155
<212> PRT
<213> Homo Sapien

<400> 132
Met Tyr Arg His Lys Asn Ser Trp Arg Leu Gly Leu Lys Tyr Pro
1 5 10 15
Pro Ser Ser Lys Glu Glu Thr Gln Val Pro Lys Thr Leu Ile Ser
20 25 30
Gly Leu Pro Gly Arg Lys Ser Ser Ser Arg Val Gly Glu Lys Leu
35 40 45

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<210> 133
<211> 24
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

```
<400> 133
tcagggctgc caggaaggaa gaggc 24
```

```
<210> 134
<211> 28
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Synthetic oligonucleotide probe

```
<400> 134
gcaggaggag aaggtcttcc agaagaag 28
```

```
<210> 135
<211> 45
<212> DNA
<213> Artificial Sequence
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<220>
<223> Synthetic oligonucleotide probe

```
<400> 135
_ agaagttcca gtcagcccac aagatgccat tgtcccccg g cctcc..45
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<210> 136

Ser Trp Thr Tyr Asn Val Gln Tyr Trp Lys Asn Gly Thr Asp Glu
155 160 165

Lys Phe Gln Ile Thr Pro Gln Tyr Asp Phe Glu Val Leu Arg Asn
170 175 180

Leu Glu Pro Trp Thr Thr Tyr Cys Val Gln Val Arg Gly Phe Leu
185 190 195

Pro Asp Arg Asn Lys Ala Gly Glu Trp Ser Glu Pro Val Cys Glu
200 205 210

Gln Thr Thr His Asp Glu Thr Val Pro Ser Trp Met Val Ala Val
215 220 225

Ile Leu Met Ala Ser Val Phe Met Val Cys Leu Ala Leu Leu Gly
230 235 240

Cys Phe Ser Leu Leu Trp Cys Val Tyr Lys Lys Thr Lys Tyr Ala
245 250 255

Phe Ser Pro Arg Asn Ser Leu Pro Gln His Leu Lys Glu Phe Leu
260 265 270

Gly His Pro His His Asn Thr Leu Leu Phe Phe Ser Phe Pro Leu
275 280 285

Ser Asp Glu Asn Asp Val Phe Asp Lys Leu Ser Val Ile Ala Glu
290 295 300

Asp Ser Glu Ser Gly Lys Gln Asn Pro Gly Asp Ser Cys Ser Leu
305 310 315

Gly Thr Pro Pro Gly Gln Gly Pro Gln Ser
320 325

<210> 138
<211> 2570
<212> DNA
<213> Homo Sapien

<400> 138
cgagcgccaa cccgctagcg cctgaatccg gcgtgctgcc cgctcgccgc 50
ccgccatggc ccgcgagcc ccgctgctcg ccgcgttgac cgcgctcttc 100
gccgccgccg ctgctggcgg agatgccccg ccgggcaaaa tcgcggtggt 150
tggggctggg attgggggct ctgctgtggc ccattttctc cagcagcact 200
ttggacctcg ggtgcagatc gacgtgtacg agaagggaac cgtgggtggc 250
cgcttggcca ccatctcagt caacaagcag cactatgaga gcggggctgc 300
ctccttccac tccctgagcc tgcacatgca ggacttcgtc aagctgctgg 350
ggctgaggca ccggcgcgag gtggtgggca ggagcgccat cttcggcggg 400

gagcacttca tgctggagga gactgactgg tacctgctga acctcttccg 450
 cctctggtgg cactatggca tcagcttcct gaggetgcag atgtgggtgg 500
 aggaggtcat ggagaagttc atgaggatct ataagtacca ggcccacggc 550
 tatgccttct cgggtgtgga ggagctgctc tactcactgg gggagtccac 600
 ctttgttaac atgacccagc actctgtggc tgagtccctg ctgcaggtgg 650
 gcgtcacgca gcgctttatt gatgatgtcg tttctgctgt cctgcggggc 700
 agctatggcc agtcagcagc gatgcccgc tttgcaggag ccatgtcact 750
 agccgggggc caaggcagcc tgtgggtctgt ggaaggaggc aataagctgg 800
 tttgttccgg tttgctgaag ctcaccaagg ccaatgtgat ccatgccaca 850
 gtgacctctg tgaccctgca cagcacagag gggaaagccc tgtaccaggt 900
 ggcgtatgag aatgaggtag gcaacagctc tgacttctat gacatcgtgg 950
 tcacgcccac cccctgcac ctggacaaca gcagcagcaa cttaaccttt 1000
 gcaggcttcc acccgcccat tgatgacgtg cagggtcttt tccagcccac 1050
 cgtcgtctcc ttgggtccacg gctacctcaa ctgctctac ttcggtttcc 1100
 cagaccctaa gcttttcccc tttgccaaca tccttaccac agatttcccc 1150
 agcttcttct gcactctgga caacatctgc cctgtcaaca tctctgccag 1200
 cttccggcga aagcagcccc aggaggcagc tgtttggcga gtccagtcct 1250
 ccaagcccct ctttcggacc cagctaaaga ccctgttccg ttcctattac 1300
 tcagtgcaga cagctgagtg gcaggcccat cccctctatg gctcccgcct 1350
 cacgtcccg aggtttgcac tccatgacca gctcttctac ctcaatgccc 1400
 tggagtgggc ggccagctcc gtggaggtga tggccgtggc tgccaagaat 1450
 gtggccttgc tggtttacaa ccgctggtac caggacctag acaagattga 1500
 tcaaaaagat ttgatgcaca aggtcaagac tgaactgtga gggctctagg 1550
 gagagcctgg gaactttcat cccccactga agatggatca tcccacagca 1600
 gcccaggact gaataagcca tgctcgccca ccaggcttct ttctgacccc 1650
 tcatgtatca agcatctcca ggtgacctac tgtctgcta tattaagggt 1700
 ccacacggcg gctgctgctt ttttttaagg gggaaagtaa gaaaagagaa 1750
 ggaaatccaa gccagtatat ttgttttatt tatttttttt aagaagaaaa 1800
 aagttcatct tcacaagggtg cttcagactt ggtttcttag ctagaacca 1850

gaagactacg ggagggaata taaggcagag aactatgagt cttattttat 1900
 tactgttttt cactacctac tcccacaatg gacaatcaat tgaggcaacc 1950
 tacaagaaaa catttacaac cagatgggta caaataaagt agaagggaag 2000
 atcagaaaaac ctaagaaatg atcatagctc ctgggttactg tggacttgat 2050
 ggatttgaag tacctagtgc agaactccct agtcaccatc tccaagcctg 2100
 tcaacatcac tgcataattgg aggagatgac tgtggtagga cccaagggaag 2150
 agatgtgtgc ctgaatagtc gtcaccatat ctccaagctt cctggcaacc 2200
 agtgggaaaa gaaacatgcg aggctgtagg aagagggaag ctcttccttg 2250
 gcacctagag gaattagcca ttctcttctt tatgcaaaga ttgaggaatg 2300
 caacaatata aagaagagaa gtccccagat ggtagagagc agtcatatct 2350
 taccctaga tgttcatccc agcagaagaa agaagaagggt gttggggtag 2400
 gattcttcag aggttagcct ggtactttct catcagacac tagcttgaag 2450
 taagaggaga attatgcttt tctttgcttt ttctacaaac ccttaaaaat 2500
 cacttgtttt aaaaagaaag taaaagcctt tttcattcaa aaaaaaaaaa 2550
 aaaaaaaaaa aaaaaaaaaa 2570

<210> 139
 <211> 494
 <212> PRT
 <213> Homo Sapien

<400> 139
 Met Ala Arg Ala Ala Pro Leu Leu Ala Ala Leu Thr Ala Leu Leu
 , 1 5 10 15
 Ala Ala Ala Ala Ala Gly Gly Asp Ala Pro Pro Gly Lys Ile Ala
 20 25 30
 Val Val Gly Ala Gly Ile Gly Gly Ser Ala Val Ala His Phe Leu
 35 40 45
 Gln Gln His Phe Gly Pro Arg Val Gln Ile Asp Val Tyr Glu Lys
 50 55 60
 Gly Thr Val Gly Gly Arg Leu Ala Thr Ile Ser Val Asn Lys Gln
 65 70 75
 His Tyr Glu Ser Gly Ala Ala Ser Phe His Ser Leu Ser Leu His
 80 85 90
 Met Gln Asp Phe Val Lys Leu Leu Gly Leu Arg His Arg Arg Glu
 95 100 105
 Val Val Gly Arg Ser Ala Ile Phe Gly Gly Glu His Phe Met Leu

	110		115		120
Glu Glu Thr Asp	Trp 125	Tyr Leu Leu Asn	Leu 130	Phe Arg Leu Trp	Trp 135
His Tyr Gly Ile	Ser 140	Phe Leu Arg Leu	Gln 145	Met Trp Val Glu	Glu 150
Val Met Glu Lys	Phe 155	Met Arg Ile Tyr	Lys 160	Tyr Gln Ala His	Gly 165
Tyr Ala Phe Ser	Gly 170	Val Glu Glu Leu	Leu 175	Tyr Ser Leu Gly	Glu 180
Ser Thr Phe Val	Asn 185	Met Thr Gln His	Ser 190	Val Ala Glu Ser	Leu 195
Leu Gln Val Gly	Val 200	Thr Gln Arg Phe	Ile 205	Asp Asp Val Val	Ser 210
Ala Val Leu Arg	Ala 215	Ser Tyr Gly Gln	Ser 220	Ala Ala Met Pro	Ala 225
Phe Ala Gly Ala	Met 230	Ser Leu Ala Gly	Ala 235	Gln Gly Ser Leu	Trp 240
Ser Val Glu Gly	Gly 245	Asn Lys Leu Val	Cys 250	Ser Gly Leu Leu	Lys 255
Leu Thr Lys Ala	Asn 260	Val Ile His Ala	Thr 265	Val Thr Ser Val	Thr 270
Leu His Ser Thr	Glu 275	Gly Lys Ala Leu	Tyr 280	Gln Val Ala Tyr	Glu 285
Asn Glu Val Gly	Asn 290	Ser Ser Asp Phe	Tyr 295	Asp Ile Val Val	Ile 300
Ala Thr Pro Leu	His 305	Leu Asp Asn Ser	Ser 310	Ser Asn Leu Thr	Phe 315
Ala Gly Phe His	Pro 320	Pro Ile Asp Asp	Val 325	Gln Gly Ser Phe	Gln 330
Pro Thr Val Val	Ser 335	Leu Val His Gly	Tyr 340	Leu Asn Ser Ser	Tyr 345
Phe Gly Phe Pro	Asp 350	Pro Lys Leu Phe	Pro 355	Phe Ala Asn Ile	Leu 360
Thr Thr Asp Phe	Pro 365	Ser Phe Phe Cys	Thr 370	Leu Asp Asn Ile	Cys 375
Pro Val Asn Ile	Ser 380	Ala Ser Phe Arg	Arg 385	Lys Gln Pro Gln	Glu 390
Ala Ala Val Trp	Arg 395	Val Gln Ser Pro	Lys 400	Pro Leu Phe Arg	Thr 405

Gln Leu Lys Thr Leu Phe Arg Ser Tyr Tyr Ser Val Gln Thr Ala
410 415 420

Glu Trp Gln Ala His Pro Leu Tyr Gly Ser Arg Pro Thr Leu Pro
425 430 435

Arg Phe Ala Leu His Asp Gln Leu Phe Tyr Leu Asn Ala Leu Glu
440 445 450

Trp Ala Ala Ser Ser Val Glu Val Met Ala Val Ala Ala Lys Asn
455 460 465

Val Ala Leu Leu Ala Tyr Asn Arg Trp Tyr Gln Asp Leu Asp Lys
470 475 480

Ile Asp Gln Lys Asp Leu Met His Lys Val Lys Thr Glu Leu
485 490

<210> 140
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 140
gggacgtgct tctacaagaa cag 23

<210> 141
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
caggcttaca atgttatgat cagaca 26

<210> 142
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tattcagagt tttccattgg cagtgccagt t 31

<210> 143
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
 ggccttgcag acaaccgt 18

 <210> 144
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 144
 cagactgagg gagatccgag a 21

 <210> 145
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 145
 gcagattttg aggacagcca cctcca 26

 <210> 146
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 146
 catcaagcgc ctctacca 18

 <210> 147
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 147
 cactgactcg aactgcttct g 21

 <210> 148
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 148
 cagctgccct tccccaacca 20

<210> 149
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 149
ggcagagact tccagtcact ga 22

<210> 150
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 150
gccaaaggggtg gtgtagata gg 22

<210> 151
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 151
caggeccct tgatctgtac ccca 24